



Infor LN Electronic Commerce User Guide for BEMIS

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About this document

This document describes the purpose of Baan Electronic Message Interchange System (BEMIS) as the internal standard to generate and read EDI messages. The contents and setup of BEMIS are also detailed.

Objectives

The objectives of this guide are to describe the purpose of BEMIS, the contents of BEMIS and how you can set up BEMIS.

Intended audience

This user guide is intended for the following categories of users:

- Users who develop business documents/EDI messages.
- Users who want to understand what they can expect from a BEMIS business document/EDI message as developed by LN.

Document summary

The first chapter, *Introduction*, describes the purpose and the general characteristics of BEMIS in the context of EDI.

The following chapters describe the rules for designing BEMIS and the contents for the BEMIS standard.

This document is also provided with a glossary list and an index, which you can find at the end of this book.

How to read this document

This document was assembled from online Help topics. As a result, references to other sections in the manual are presented as shown in the following example:

For details, refer to *Introduction*. To locate the referred section, please refer to the Table of Contents or use the Index at the end of the document.

Underlined terms indicate a link to a glossary definition. If you view this document online, you can click the underlined term to go to the glossary definition at the end of the document .

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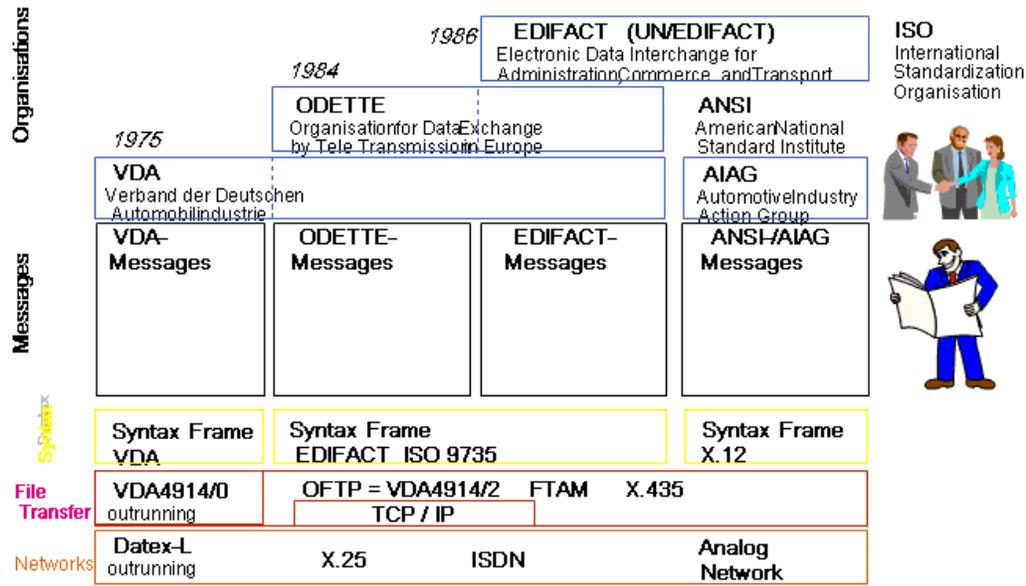
Electronic Data Interchange

Electronic data interchange (EDI) is used to exchange business documents between two systems. For example, a customer sends a purchase order to a supplier through EDI after which the supplier responds by sending an invoice to the customer electronically. Therefore, EDI eliminates the transfer of paper copies of business documents.

Many external standards of these business documents are defined that provide rules to the related business processes, the business document structure, and the content. In Europe, the UN/ EDIFACT standard is used; in the United States, the standard is called ANSI. Moreover, industry-specific standards are also used. For example, SPEC2000 and AECMA for aerospace and defense, and VDA/ODETTE in the automotive industry.

LN has its own internal standard, called BEMIS (Baan Electronic Message Interchange System). LN uses the BEMIS standard to generate and read messages. All external standards can be translated into the internal BEMIS standard or generated from BEMIS by an EDI translator, which uses standard EDI message formats that are supported by your business partners.

The following figure illustrates the development of the various standards:



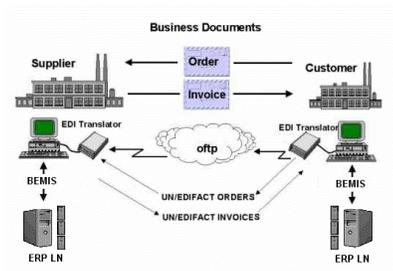
Chapter 2

An overview of BEMIS



An overview of BEMIS

In Electronic Data Interchange, you can specify business documents of various external standards, such as VDA, UN/EDIFACT, Odette, ANSI, and so on. Baan Electronic Message Interchange System (BEMIS) is the internal LN standard to which external standards are converted. Conversion of the internal standard to an external standard and vice versa is carried out by an EDI translator.



Example

These business documents/EDI messages contain forecast information on schedules:

- VDA 4905
- Odette DELINS
- UN/EDIFACT DELFOR
- ANSI X12 830

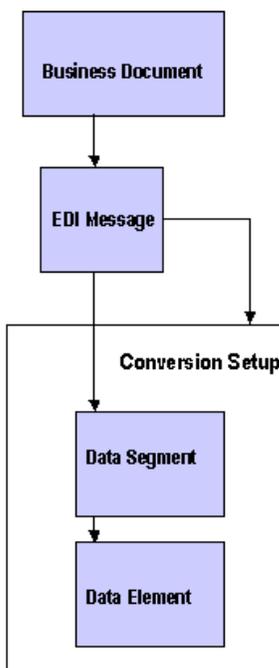
All of these documents are supported by the BEMIS business document BEMIS MRL001 (Material Release).

Business documents can also be used internally in a multisite environment. In this case, BEMIS messages need not be converted to an external standard.

BEMIS elements

The following elements are used for BEMIS:

- Business document
- EDI message
- Conversion setup
- Data segment
- Data element



A business document contains one or more EDI messages. An EDI message contains one or multiple data segments that consist of one or multiple data elements.

Business document

A business document describes a business process between trading partners.

BEMIS supports the following business documents:

- Order
- Schedule
- Delivery

- Freight
- Invoice
- Error Handling

EDI message

EDI messages are the messages that are communicated between trading partners within a specific business document.

BEMIS supports the following EDI messages:

- Order (ORD)
- Order Acknowledgement/Response (ORS)
- Order Change (ORC)
- Order Change Acknowledgement/Response (OCA)
- Material Release (MRL)
- Shipping Schedule (SHP)
- Sequence Shipping Schedule (SEQ)
- Advance Shipment Notification (ASN)
- Receipt Discrepancy Notification (RDN)
- Invoice (INV)
- Load Information to Carrier (FML)
- Carrier Status Information (FMS)
- Error Notification (ERN)
- Message Status (STATUS)

Note

The Message Status (STATUS) can be used to update the status of previously generated EDI messages. Only an incoming conversion setup exists for this message.

Conversion setup

The conversion setup is related to the format of an EDI message within a specific service/feature pack.

Data segment

A data segment is the intermediate unit of information in an EDI message. A data segment consists of a predefined set of functionally related data elements that are identified by their sequential positions within the set.

Data element

A data element is the smallest named item in the BEMIS standard. It can represent a qualifier, a value, or a text, such as a description.

BEMIS - design principles

A BEMIS business document must be designed following a predefined set of rules. If these rules are not met, the business document does not comply with the BEMIS standards.

EDI message

The code of an EDI message within a business document includes the name and version (XXX999). The name is alphanumeric and the version is numeric. Both have a length of 3.

Example

The order EDI Message is called ORD 001.

Message Name	Version
--------------	---------

ORD for Order	001
---------------	-----

In situations such as the following, multiple versions of an EDI message can exist:

- 80% of the customers require a simple version and 20% require a complex version of the message.
- Two external standards conflict.

Conversion setup

If changes are made to the EDI message within a service/feature pack, a new conversion setup is created for that feature pack.

The format of the conversion setup is XXX999, in which:

- The first three positions are equal to the first three positions of the EDI Message

- The last 3 positions are sequential

Each time a change is made, the number increases with 1.

Example

The order EDI Message is called ORD 001.

The first conversion setup is called ORD001 in Infor LN.

Changes are made to EDI Message ORD001 in Infor LN SP1. This results in a new conversion setup called ORD002.

In Infor LN FP2 no changes are made to EDI Messages ORD001. As a result, the conversion setup does not change and remains ORD002.

Data segment

Each data segment has a unique code within an EDI message. The format of the data segment code is SA99. The unique code of the first data segment is SA1, the second is SA2, the tenth is SA10, and so on.

Backwards compatibility - position

A business document consists of multiple EDI messages that contain multiple data segments with multiple positions. On those positions, data elements can be defined. Once the functional meaning of a position is determined, do not change it.

For example, on the data segment Order Line, position 10 contains the item (tdsls401.item). In a new version of a business document the item must still be on position 10.

Important!

To minimize the impact when implementing a new version/release or feature pack of LN, do not change positions. If the functional meaning of a position changes, you must also adapt the EDI translation software that converts the external standard into the internal (BEMIS) standard or the other way around.

Backwards compatibility - conversion setup

Within a specific LN version/release, you can use business documents of older feature packs in new feature packs. In this way, the impact of implementing a new feature pack is reduced, because customizations on business documents need not be re-executed.

Only if you want to use new functionality, customizations must be executed on the new business document, or the new functionality must be added to existing business documents.

Backwards compatibility - generic interface

To set up a generic interface in which data can be reused and costs are reduced, you must define business documents/EDI messages that are related to different external standards.

All relevant information concerning the related business processes must be defined in the business document/EDI message in such a way that different external standards are supported. Only in case of conflicting external standards, multiple business documents/EDI messages can be defined.

Message overhead

Each EDI message within a business document always contains a data segment, called message overhead (data segment SA1).

The information of the message overhead is standardized and in accordance with the LN application. The following table displays the content of the message overhead.

SA1 Message Overhead

Status	Mandatory
Frequency	Once for each EDI message
Description	The message overhead data segment contains information about the transmitter, the message type and the time of the transmission. The message reference identifies all related data segments of this message.

Pos.	Description	BEMIS format		Mapping table	Mapping table
		Key	Mandato- ry	fields (OUT)	fields (IN)
				Code	Code
1	Data Segment	-	Yes	"SA1"	-
2	Message Reference	X	Yes	ecedi701.bano	ecedi702.bano
3	Identification of the Sender	X	Yes	ecedi020.neta	ecedi702.bpid

4	EDI Message Reference	X	Yes	Object Identification, for example, tdpur400.orno	ecedi702.msno
5	EDI message	-	Yes	ecedi001.code	ecedi702.mess
6	Organization	-	Yes	ecedi003.code	ecedi702.orga
7	Order Type	-	Yes	ecedi011.koor	ecedi702.koor
8	Identification of the Receiver	-	No	ecedi028.neta	-
9	Transmission Date	-	Yes	date()	ecedi702.send
10	Transmission Time	-	No	time()	-
11	Identification of Test Message	-	No	""	ecedi702.test
12	Data Segment End Sign	-	Yes	"SA_END"	-

Data segment start and end signs

Each data segment starts with a data segment identification and ends with a data segment end tag. So, the first data segment starts with SA1 and ends with SA1_END, following the data segment naming and versioning.

Data element length

The BEMIS standard uses a variable field length. A fixed field length is not allowed within the BEMIS standard.

Data record separator

The BEMIS standard uses the "LF" control character for separating data records.

Empty positions

If the delimiter is ";" and the sign around the strings is "" on the network, the BEMIS standard shows an empty position as follows:

Alphanumeric	"SA1";...;"...;"SA1_END"
Numeric	"SA1";...;;...;"SA1_END"

If the sign around strings on the network is empty, no difference exists between alphanumeric and numeric. In this case, the BEMIS standard shows the empty position as shown for numeric data elements in the above table.

Single/multi file

In Electronic Commerce, you can define single and multi files. In case of a single file, the entire EDI Message is stored in one file. In case of multi files, each data segment of the EDI message is stored in a separate file.

The BEMIS standard only supports the single file option for incoming and outgoing EDI messages.

BEMIS - Content

Although most of the EDI setup data is user-definable, LN also provides all the necessary EDI data as default data. This information can be exported from the Enterprise Base Data company 050, or downloaded at <http://edi.infor.com>. The result is an ASCII file, called `defaults.edi`, that can be imported into the companies that use EDI.

`defaults.edi`

The `defaults.edi` ASCII file contains:

- The default organization, called BEM (BEMIS message standard).

- The following EDI messages:

- | | |
|--------|---|
| ORD001 | Order (ORD) |
| ORS001 | Order Acknowledgement/Response (ORS) |
| ORC001 | Order Change (ORC) |
| OCA001 | Order Change Acknowledgement/Response (OCA) |
| MRL001 | Material Release (MRL) |
| SHP001 | Shipping Schedule (SHP) |
| SEQ001 | Sequence Shipping Schedule (SEQ) |
| PUS001 | Pick-Up Sheet (PUS) |
| ASN001 | Advance Shipment Notification (ASN) |
| RDN001 | Receipt Discrepancy Notification (RDN) |
| INV001 | Invoice (INV) |
| INV100 | Invoice (Tax on Line) (INV) |
| SBI001 | Self Billed Invoice (SBI) |
| FML001 | Load Information to Carrier (FML) |
| FMS001 | Carrier Status Information (FMS) |
| ERN001 | Error Notification (ERN) |
| STATUS | Message Status |

- Supported EDI messages, which is the same list as above. Almost all EDI messages are supported in both directions (*In* and *Out*).
The exceptions are:
 - FML001: Only *Out* supported
 - FMS001: Only *In* supported
- Outgoing messages by session. These are the same EDI messages, but now for the outgoing EDI messages a relation with the LN session is made.
- Conversion setups for the EDI messages.

Appendix A

Glossary



ANSI

This acronym stands for American National Standards Institute. ANSI is the central body responsible for the identification of a single consistent set of voluntary standards called American National Standards. ANSI is also the US representative to nontreaty standards organizations.

conversion setups

A code that defines the layout of the ASCII file that contains the message data. This code contains information on the mapping of data elements between ERP application tables and the ASCII files. Although predefined conversion setups are available, you can create your own custom conversion setups.

EDIFACT

This acronym stands for Electronic Data Interchange for Administration, Commerce, and Transport. A worldwide organization developing standards for electronic data interchange.

There are other similar organizations (for example, Odette), each using its own subset of standard EDIFACT messages.

When you define messages, you can use the naming convention that coincides with the standard naming conventions to which you are accustomed.

EDI standard

A protocol defined at national and international levels to define the process, procedures, and format of electronically transmitted data (messages) between two business partners.

electronic data interchange (EDI)

The computer-to-computer transmission of a standard business document in a standard format. Internal EDI refers to the transmission of data between companies on the same internal company network (also referred to as multisite or multicompany). External EDI refers to the transmission of data between your company and external business partners.

multisite

Relating to the flow of goods or information between multiple sites.

Typically, these sites are located in various regions or countries, but they belong to the same group of companies.

These sites are modeled as financial or logistical companies within LN.

VDA

Acronym for Verband der Automobilindustrie; A standard for automotive electronic interchange of business transactions in Germany. This particular standard uses a fixed length field/record format.

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